Earth Science

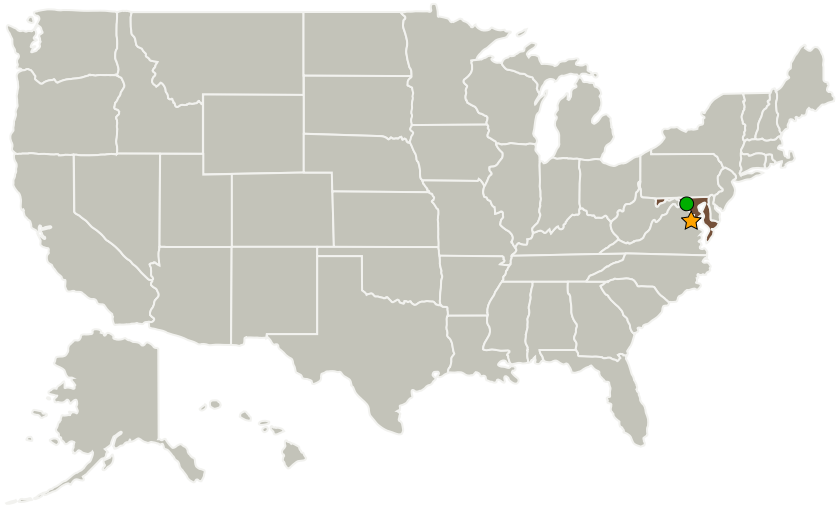
A Compact Remote Sensing Lidar for High Resolution Measurements of Methane

Completed Technology Project (2011 - 2015)

Project Introduction

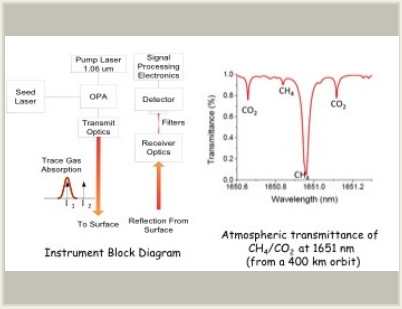
• Develop the technology for a compact, space-qualifiable laser transmitter for a lidar operating at 1.65 μ to enable Earth observation CH4 measurements.
• Reduce the risk, cost, size, mass and volume of the CH4 lidar instrument by scaling the laser power of the existing laboratory breadboard.
• Demonstrate and validate simultaneous, high sensitivity, methane and CO2 measurements using the proposed methane lidar and an operational CO2 lidar.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★NASA Headquarters(HQ)	Lead Organization	NASA Center	Washington, District of Columbia
●Goddard Space Flight Center(GSFC)	Supporting Organization	NASA Center	Greenbelt, Maryland

Primary U.S. Work Locations
Maryland



Project Image A Compact Remote Sensing Lidar for High Resolution Measurements of Methane

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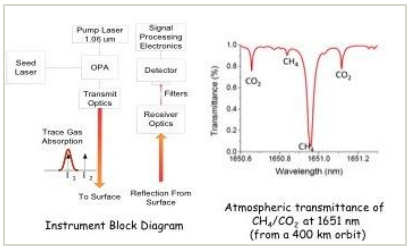
Images



10478-1359478836633.jpg
Project Image A Compact Remote Sensing Lidar for High Resolution Measurements of Methane *(https://techport.nasa.gov/image/1542)*

Organizational Responsibility

Responsible Mission Directorate:
Science Mission Directorate (SMD)

Lead Center / Facility:
NASA Headquarters (HQ)

Responsible Program:
Earth Science

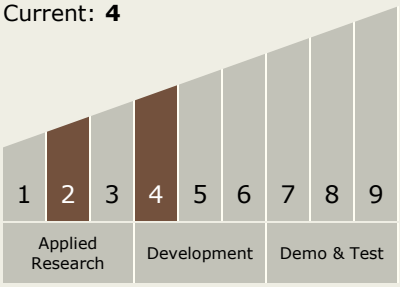
Project Management

Program Director:
George J Komar

Principal Investigator:
Haris Riris

Technology Maturity (TRL)

Start: **2**
Current: **4**



Technology Areas

Primary:

Continued on following page.

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Completed Technology Project (2011 - 2015)

Technology Areas *(cont.)*

- TX08 Sensors and Instruments
  - TX08.1 Remote Sensing Instruments/Sensors
    - TX08.1.5 Lasers

Target Destination

Earth